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Table 2

Climatologic Summary of the Tri-cities Area: Monthly  
Normals, Means and Extremes, 1931-1960.

LATITUDE 46°34'  
LONGITUDE 119°35'  
ELEV. (ABOVE GROUND) 724 ft

## CLIMATOLOGICAL SUMMARY

STATION RICHARD WORKS  
METEOROLOGY STATION  
30 miles NW of Richland, Wash

NORMALS, MEANS, AND EXTREMES

Temperature										Precipitation										Wind					Solar Radiation				Mean number of days										
Normal					Extremes					Normal degree days					Snow, Sleet					Peak Gust					Average sky cover sunrise to sunset				Thunderstorms										
Month	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest	Year	Normal total	Maximum monthly	Year	Minimum monthly	Year	Maximum in 24 hrs.	Year	Mean total	Maximum monthly	Year	Maximum in 24 hrs.	Year	Relative humidity	Precipitation direction	Mean hourly speed	Direction	Year	Total	Greatest Daily	Year	Least Daily	Year	Heavy fog	Precipitation .01 inch or more	Max. temp.	Min. temp.						
(a)	(b)	(b)	(b)	50	50	50	50	(b)	49	49	/9	18	49	18	16	17	17	17	17	17	Precipitation	Mean	Speed	Direction	Year	Mean Daily Total	Greatest Daily	Year	Least Daily	Year	Year	Precipitation .01 inch or more	Max. temp.	Min. temp.					
J	36.9	22.4	29.6	65	1935	-23	1937	1123	.91	2.15	1933	.13	1949	1.08	1948	5.8	23.4	1950	7.1	1954	77	NW	6.0	64	SM	1953	7.6	116	256	1956	27	1958	0	10	0	11	27	2	
J	44.4	26.6	35.5	71	1924	-23	1950	802	.63	3.08	1940	T	1920	1.24	1916	2.8	26.0	1916	5.2	1959	71	NW	7.0	59	SSW	1957	7.4	196	422	1958	40	196	0	4	0	3	21	1	
M	55.6	33.5	44.4	83	1960	6	1955	655	.48	1.86	1957	.00	1942	.59	1949	.8	4.2	1951	2.2	1957	58	WNW	8.2	70	SW	1956	6.8	334	530	1961	80	1957	#	2	7	0	#	16	0
A	66.6	40.2	53.4	95	1934	12	1935	371	.37	.96	1932	.00	1933	.55	1925	T	T	1955	T	1955	47	WN	8.8	54	S	1958	6.3	484	691	1958	160	1955	1	#	5	0	5	0	
M	76.0	48.6	62.3	103	1936	28	1954	149	.50	1.71	1948	.00	1931	1.50	1934	T	T	1960	T	1960	44	WNW	8.5	71	SSW	1948	5.9	558	782	1959	133	1959	3	#	6	3	0	8	
J	82.5	55.1	68.8	110	1912	33	1933	37	.71	2.92	1950	.00	1919	1.25	1942						40	WNW	9.0	72	SW	1957	5.1	631	809	1957	190	1961	3	#	5	0	0	0	
J	91.8	60.9	76.3	115	1939	41	1935	3	.15	.73	1914	.00	1939	.73	1914						31	WNW	8.5	50	WSW	1947	2.4	668	780	1957	150	1955	2	0	2	21	0	0	
A	88.9	59.1	74.0	113	1961	40	1918	5	.20	1.18	1920	.00	1955	.52	1947						35	WNW	8.0	66	SW	1961	3.2	558	721	1957	107	1959	3	#	3	18	0	0	
S	80.1	51.4	65.8	102	1950	25	1926	71	.34	1.56	1947	T	1961	.82	1947						41	WNW	7.5	65	SSW	1953	4.0	20	520	1959	61	1957	1	#	5	0	0	0	
O	65.4	41.3	53.4	90	1933	6	1935	378	.73	2.72	1957	.00	1917	1.91	1957	T	.3	1957	.3	1957	59	WNW	6.6	63	SSW	1950	5.8	261	428	1958	47	1956	F	2	7	0	5	5	
N	48.2	31.0	39.6	73	1934	-1	1955	769	.77	3.05	1926	T	1939	.65	1949	1.5	12.7	1955	4.8	1955	73	NW	6.1	64	SSW	1949	7.2	145	283	1957	22	1956	0	7	9	0	2	18	
D	40.5	27.4	33.9	68	1933	-27	1919	983	.87	2.53	1931	.11	1946	.99	1958	3.1	13.4	1955	3.4	1955	80	NW	6.0	71	SW	1955	8.0	92	185	1961	17	1959	0	12	10	0	8	25	
Y	64.7	41.5	53.1	115	1939	-27	1919	5346	6.73	3.08	1940	.00	1955	1.91	1957	14.0	26.0	1916	7.1	1954	55	WNW	7.5	72	SW	1957	5.8	372	809	1957	17	1959	13	37	75	56	24	117	4

(a) Length of record, years.

(b) Normal values are based on the period 1931-60 and are means adjusted to represent observations taken at the present standard location. # less than 1/

(b) *Length of record longer than 18 years includes observations from 1912-1944 made by U.S. Weather Bureau cooperative observers at the present standard locations.*

Table B  
 Climatologic Summary of the Tri-cities  
 Area: Monthly Mean Precipitation for  
 1931-1962.

**TOTAL PRECIPITATION**

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
KENNEWICK													
1931	1.17	.33	.69	.36	.02	.95	.01	T	.04	.32	1.64	2.07	7.60
1932	.87	.68	.95	.42	.61	T	.13	.09	.00	.84	1.18	.49	6.26
1933	.83	1.10	.55	.15	.95	.04	.08	.08	.30	.85	.55	1.55	7.03
1934	.54	.20	.57	.18	.14	.33	.01	.12	.49	.72	1.08	.72	5.10
1935	.25	.54	.20	.59	.14	.10	.07	.02	.04	.49	.39	1.22	4.05
1936	1.52	.97	.10	1.18	.26	.29	.03	.06	.11	T	.02	1.13	5.67
1937	1.09	.61	1.07	1.10	.15	1.20	.06	.08	.09	.48	2.07	1.29	9.29
1938	.79	1.11	.67	.44	.12	.61	.12	.08	.13	.54	.60	.37	5.58
1939	.74	.73	.60	.15	.01	.36	.11	T	.57	.35	.03	1.50	5.15
1940	1.71	3.57	.63	.41	.34	.01	.56	.00	.48	1.23	1.49	1.81	12.24
1941	1.68	.87	.77	.25	.63	1.40	.00	1.03	.73	.52	.80	.60	9.28
1942	1.12	.69	.07	.17	1.06	1.55	.15	.01	.45	.15	3.04	1.87	10.33
1943	.32	.47	.08	1.00	.40	.90	.00	.20	.00	1.58	.34	.70	5.99
1944	.42	.77	.28	.87	.53	.61	.00	.00	.02	.11	1.15	.80	5.56
1945	1.46	.99	.78	.45	2.14	.39	T	.50	.34	.48	.90	1.61	10.04
1946	.78	.41	.84	.07	.17	.37	.03	.04	.67	.50	1.22	.25	5.35
1947	.20	.41	.39	.64	.41	.98	.37	.17	.87	3.07	1.19	1.14	9.84
1948	1.50	1.13	.24	1.30	2.05	2.27	1.38	.07	.16	.72	.92	1.16	12.90
1949	.20	1.01	.92	.05	.20	.01	.00	T	.29	.11	1.00	.35	4.14
1950	1.33	.92	.88	.49	.26	1.04	.02	.03	.03	2.37	.84	1.48	9.69
1951	.73	.83	.42	.28	.25	1.65	.03	.12	.19	.79	.85	.76	6.90
1952	.75	.84	.16	.16	.41	.86	.10	T	.35	.01	.40	1.63	5.67
1953	2.49	.48	.19	.92	.35	.42	.00	.35	T	.47	1.23	.76	7.06
1954	.83	.21	.85	.14	.17	.22	.33	.56	.37	.69	.80	.52	5.69
1955	.76	.17	.21	.66	.56	.45	1.31	.00	.51	.63	2.14	2.72	10.12
1956	2.00	.96	.21	T	1.16	.37	.08	.22	.01	.63	.28	.76	6.68
1957	.40	.37	1.77	.28	.82	.43	.22	.02	.93	2.12	.24	.50	8.10
1958	2.06	1.69	1.00	.88	.79	.40	T	.02	.04	.07	.78	1.81	9.54
1959	2.15	.89	.24	.22	.34	.26	.03	.13	1.49	.47	.31	.47	7.00
1960	.74	.76	.56	.54	.81	.37	T	.33	.23	.51	.89	.79	6.53
RICHLAND													
1945	.89	1.43	.53	.58	2.07	.58	.00	.28	.46	.35	.88	1.53	9.59
1946	.42	.57	.64	.10	.64	.58	.06	.06	.66	.54	.58	.13	4.98
1947	.10	.40	.32	.47	.14	.59	.57	.42	.53	2.41	.68	.78	7.41
1948	1.38	1.73	.21	.95	1.54	2.64	.93	.14	.04	.52	.84	1.28	12.20
1949	.60	.86	.82	T	.17	T	.00	.00	.31	.20	1.04	.20	4.20
1950	1.29	.61	.89	.30	.16	1.67	.12	.02	.02	2.24	.54	1.77	9.63
1951	.89	.58	.37	.54	.37	1.74	.07	T	.08	1.53	.71	.52	7.40
1952	.50	.69	.19	.07	.43	1.19	.00	.00	.05	.05	.17	1.24	4.58
1953	2.84	.35	.21	.79	.41	.43	.00	.40	.00	.20	1.50	.63	7.76
1954	1.06	.18	.93	.19	.31	.14	.33	.16	.33	.63	.60	.53	5.39
1955	.52	.12	.32	.37	.44	.33	.72	.00	.28	.48	1.80	2.43	7.81
1956	1.87	1.41	.14	T	.35	.42	.02	.45	.02	.67	.11	.63	6.09
1957	.43	.25	1.98	.40	.92	.29	.14	.01	.60	1.37	.29	.39	7.07
1958	1.99	1.45	.60	.63	.76	.23	.32	.12	.01	.10	.85	1.51	8.57
1959	1.79	.86	.33	.09	.56	.25	.03	.17	1.12	.54	.24	.37	6.35
1960	.62	.86	.79	.46	.71	.29	T	.62	.27	.16	.82	.71	6.31
1961	.62	2.30	1.23	.36	1.09	.71	.06	.16	.31	.13	.77	1.05	8.77
1962	.23	.61	.85	.45	2.02	.15	T	.37	.20	1.34	.72	.96	7.90

Table 4

Return Periods	Duration of Precipitation						
	30 Min.	1 Hour	2 Hours	3 Hours	6 Hours	12 Hours	24 Hours
2 years	0.3	0.4	0.4	0.5	0.7	0.8	0.9
5 years	0.4	0.6	0.7	0.7	0.9	1.1	1.2
10 years	0.5	0.7	0.9	0.9	1.2	1.3	1.4
25 years	0.6	0.8	1.0	1.1	1.4	1.4	1.7
50 years	0.8	1.0	1.2	1.3	1.6	1.6	2.0
100 years	1.0	1.2	1.5	1.5	1.7	1.9	2.4

Reference: Weather Bureau Technical Paper No. 40

Table 5

Climatologic Summary of the  
Tri-cities Area: Monthly Mean Temperatures  
for 1931-1962

**AVERAGE TEMPERATURE**

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	An'l
KENNEWICK													
1931	37.4	39.4	46.7	53.8	64.6	67.8	76.2	74.3	65.0	52.8	39.4	30.0	54.0
1932	31.4	36.0	46.5	55.3	59.8	70.1	70.8	72.2	63.4	54.4	45.6	32.0	53.1
1933	37.7	29.6	45.8	53.3	57.5	69.0	76.0	72.4	61.6	56.7	44.0	44.2	54.0
1934	42.2	43.3	52.0	61.4	66.5	70.8	75.5	74.8	63.6	56.8	47.8	39.0	57.8
1935	35.0	39.0	44.9	51.4	60.6	67.8	73.8	69.8	65.5	50.9	35.2	32.2	52.2
1936	36.5	22.1	45.9	56.0	64.0	70.7	73.0	72.5	62.4	54.0	32.0	36.6	52.1
1937	13.6	30.8	47.2	52.4	61.8	67.0	75.1	68.7	64.8	53.6	45.2	38.0	51.7
1938	36.0	37.0	46.3	53.6	62.9	71.2	79.0	72.8	70.8	54.4	41.0	38.0	55.2
1939	38.8	36.8	47.0	56.7	65.0	67.8	76.8	75.7	66.7	54.5	39.6	38.6	55.3
1940	32.1	39.9	49.4	55.0	64.8	71.6	76.1	74.0	68.6	56.6	35.0	35.0	54.8
1941	33.9	39.0	49.7	56.7	62.0	67.8	79.2	72.8	61.6	52.3	43.8	38.4	54.8
1942	24.2	38.4	46.6	56.5	60.8	66.7	77.0	76.7	67.0	56.4	40.4	36.6	53.9
1943	26.2	38.8	44.8	57.1	59.4	65.0	76.2	71.5	67.4	54.0	40.2	33.6	52.8
1944	32.0	38.3	44.2	54.8	62.8	67.5	76.0	72.2	66.9	56.8	40.6	31.8	53.7
1945	37.4	42.2	45.2	52.2	62.6	66.6	75.4	73.2	62.1	55.7	43.5	36.2	54.4
1946	37.8	42.0	48.8	54.8	62.4	66.6	73.8	73.3	62.2	50.0	38.7	37.1	54.0
1947	30.6	39.6	48.6	56.1	67.4	67.4	74.2	70.8	65.0	55.8	42.8	36.9	54.6
1948	33.5	35.6	43.8	51.0	59.1	71.4	71.6	71.4	62.2	49.8	43.1	30.5	51.9
1949	15.6	34.4	46.3	57.3	65.1	68.2	72.9	71.9	65.3	49.0	46.0	37.2	52.4
1950	15.3	33.1	44.6	51.2	59.2	67.1	74.8	72.8	64.0	51.5	41.9	-	-
1951	35.8	39.1	41.9	53.3	62.3	68.5	75.9	72.6	65.4	52.9	41.0	30.3	53.2
1952	28.4	39.9	45.9	56.5	63.5	67.7	74.8	72.8	65.3	56.3	35.6	37.6	53.7
1953	41.8	39.7	44.6	48.8	55.2	59.9	73.0	72.0	66.8	54.7	43.2	37.7	53.1
1954	33.-	41.7	42.8	51.8	62.0	65.6	-	69.2	63.1	50.2	47.0	36.1	-
1955	33.3	37.9	42.0	49.4	57.9	70.0	71.5	-	63.1	54.4	34.2	32.3	-
1956	33.5	-	45.9	56.1	64.4	66.2	-	72.1	63.5	51.9	37.5	37.8	-
1957	20.3	37.3	45.7	54.7	64.7	70.0	72.4	69.0	65.1	50.1	40.3	41.0	52.6
1958	38.6	45.3	44.6	52.7	67.5	72.9	79.1	-	64.3	53.2	44.3	37.4	-
1959	35.0	39.0	47.4	54.8	58.6	68.9	75.2	69.9	62.1	53.2	38.3	34.4	53.1
1960	23.2	38.6	45.6	54.8	60.1	69.0	79.2	71.3	64.1	54.7	44.8	31.8	53.1
RICHLAND													
1945	37.8	41.6	45.4	53.5	64.4	69.6	79.3	77.4	65.2	57.6	43.6	35.6	55.9
1946	37.6	42.0	49.2	56.0	66.1	69.3	78.2	77.0	66.2	52.9	41.2	38.4	56.2
1947	32.2	41.2	51.2	57.2	70.2	67.2	76.4	73.7	68.4	57.0	44.6	36.8	56.3
1948	36.0	34.6	43.0	51.0	60.2	73.1	71.6	72.6	67.4	-	43.3	30.6	-
1949	15.6	33.4	45.6	56.3	66.7	69.1	75.4	74.8	68.0	50.5	46.3	37.7	53.3
1950	15.9	31.8	43.7	51.0	59.7	67.8	75.5	76.7	68.2	52.8	42.3	40.1	52.1
1951	35.7	37.9	41.7	55.1	62.7	69.8	78.7	74.9	67.5	55.2	41.8	31.8	54.4
1952	28.8	40.6	47.2	57.6	65.1	69.5	78.2	75.4	70.0	60.2	37.0	37.8	55.6
1953	46.9	44.4	49.8	54.0	61.4	65.3	76.6	75.1	69.4	57.8	47.2	45.0	57.6
1954	33.9	42.2	44.3	53.9	63.5	66.8	75.0	72.4	65.2	51.8	48.5	37.7	54.6
1955	34.9	39.3	42.9	50.3	59.3	71.4	73.6	75.4	67.4	56.5	36.5	33.1	53.4
1956	35.3	28.6	46.4	57.5	66.0	67.6	78.5	74.7	67.9	54.3	39.6	38.0	54.5
1957	20.8	38.0	46.1	56.0	66.1	71.0	75.2	73.3	69.8	52.8	43.3	43.1	54.7
1958	40.6	47.7	46.0	54.1	70.1	75.3	82.0	80.7	67.9	56.2	45.4	38.7	58.7
1959	36.5	39.4	48.0	55.5	59.7	68.8	75.8	71.6	64.3	55.5	40.4	36.8	54.3
1960	25.8	40.4	46.7	54.5	59.8	69.3	79.8	71.6	65.8	56.6	45.3	32.4	54.0
1961	37.3	47.9	49.2	55.1	62.2	74.9	78.2	79.6	63.9	53.9	38.4	37.8	56.5
1962	34.2	40.0	44.7	57.4	59.6	68.8	75.1	72.7	67.6	54.9	47.3	40.6	55.2